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PATENT

IN THE UNITED STATES PATENT & TRADEMARK OFFICE

Inventor: Matthew Waight

U.S. Serial No.: 09/811,702

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Examiner: Michael R. Shannon

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Title: DYNAMIC UPSTREAM AMPLIFIER POWER MANAGEMENT

**PRE-APPEAL BRIEF  
REQUEST FOR REVIEW**

Mail Stop Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir,

**CERTIFICATE OF FACSIMILE**  
I hereby certify that this correspondence is being filed by  
facsimile to Assistant Commissioner for Patents at 571 273-  
8300  
on 6/23/06 by *L. T. Cullen*  
Lawrence T. Cullen

Please enter these arguments in response to the Final Office Action mailed on  
February 23, 2006 and conduct a pre-appeal brief conference.

**REMARKS**

**I. Introduction**

Claims 1, 4, 5, 8, 9, 12 and 13 are pending in the above application.

Claims 1, 4, 5, 8, 9, 12 and 13 stand rejected under 35 U.S.C. § 103.

**II. Rejection Under Prior Art**

Claims 1, 4, 5, 8, 9, 12 and 13 stand rejected under 35 U.S.C. § 103 as being  
unpatentable over McMullan Jr. (U.S. Pat. 5,251,324) in view of Jung (6,678,893).

Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is **some teaching, suggestion, or motivation to do so** found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). See also MPEP 2143.01. It should be recognized that the fact that the prior art could be modified so as to result in the combination defined by the claims at bar would not have made the modification obvious unless the prior art suggests the desirability of the modification. *In re Deminski*, 796 F.2d 436, 230 USPQ 313 (Fed. Cir. 1986). Recognizing, after the fact, that such a modification would provide an improvement or advantage, without suggestion thereof by the prior art, rather than dictating a conclusion of obviousness, is an indication of improper application of hindsight considerations. Simplicity and hindsight are not proper criteria for resolving obviousness. *In re Warner*, 379 F.2d 1011, 154, USPQ 173 (CCPA 1967).

McMullan Jr., Jung, taken alone or in combination, disclose or suggest causing an upstream amplifier of a cable modem to power on during transmission of upstream signals and power off when not transmitting said upstream signals, thereby reducing power consumption of the cable modem in the manner recited in any of independent claims 1, 5 and 9. McMullan discloses a set top box which can support pay per view impulse purchasing (IPPV) by an upstream communication to the CATV headend. McMullan, col. 11: 7-68. McMullan discloses that "upon completion of transmission, microprocessor 504 also switches the RF circuitry off, thus reducing the noise output of the module and reducing the overall power demand." However, McMullan does not

disclose a CPLD which generates an amplifier switch signal for connecting the upstream amplifier to an RF tuner for transmission of the upstream data signal to the headend, and which generates an amplifier control signal for powering on and off said upstream amplifier, wherein the CPLD generates the amplifier switch signal after the amplifier control signal is generated, thereby stabilizing said upstream amplifier. Jung also does not disclose such feature.

Jung discloses a bidirectional trunk amplifier which uses an upstream pilot signal when requested by the headend. Jung, abs.; col. 4: 55-60. Jung does not disclose or suggest to turn off an amplifier at all, let alone the upstream amplifier. In fact, as Jung primarily uses a bidirectional amplifier, turning off the bidirectional amplifier would also likely inhibit receipt of downstream communications, rendering it impossible for the "request" for an upstream pilot signal from the headend to be received by CPU 609 in the system of Jung. Jung; col. 4: 48 through col. 5: 17. In any case, Jung's discussion of when to generate an upstream pilot signal has no bearing on when to turn on or off the amplifier.

The Office action appears to take issue with Applicant's characterization of the McMullan reference, but still appears to agree that the CPLD element (or at least portions thereof), as recited in the claims are not disclosed by McMullan. While the Office action appears to somehow justify parsing the CPLD into parts of the claimed element which are allegedly disclosed by McMullan and parts which are admittedly not disclosed, the Examiner is respectfully reminded that the claims must be considered as a whole, not in piecemeal manner. See, MPEP § 2141, third heading "when applying 35 U.S.C. 103, the following tenets of patent law must be adhered to: (A) the claimed invention must be

considered as a whole.” The arguments presented by in the Office action make it crystal clear that the claims are not viewed as a whole but rather as bits and pieces which are being attempted to be cobbled together to make a rejection. Such tactic is clearly improper and the rejection should be withdrawn.

The Office action further alleges that Jung does disclose to turn off an upstream amplifier and states:

The RF Amplifier 612 is clearly a piece of the Pilot Signal Generator 610, and when the Pilot Signal Generator 610 is turned off [col. 4, lines 49-60], the Amplifier is therefore also turned off. The Amplifier being a part of the Signal Generator 610 clearly shows that when the Signal Generator is turned on/off, so is the Amplifier.

Final Office action, pg. 3. While the RF Amplifier 612 is a part of the Pilot Signal Generator circuit 610, it is not an “upstream amplifier for receiving synchronized upstream communication signals from said MAC chip” as recited in claim 1, for example. Jung explicitly discloses an upstream amplifier (as part of bidirectional amplifier 102 in Figure 2) which receives signals from a MAC 206, in addition to disclosing the RF Amplifier 612. Clearly, RF Amplifier 610 does not receive upstream communication signals from MAC 206 in Jung. Jung, Fig. 6. Even when RF Amplifier 610 is deactivated, bidirectional amplifier 102, which actually transmits upstream signals from MAC 206, is still active in the Jung reference. In short, contrary to the conclusions in the Office action, Jung does not disclose or suggest to turn off an upstream amplifier which receives communications from a MAC chip.

As Jung itself does not turn off bidirectional amplifier 102, there is clearly no motivation to modify McMullan Jr. to turn off an upstream amplifier based on the teachings of Jung.

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Accordingly, as neither McMullan Jr. nor Jung, taken alone or in combination, disclose or suggest all of the limitations of independent claims 1, 5 and 9, the combination of McMullan Jr. and Jung does not render those claims, nor claims, 4, 8 and 12-13 which depend on claims 1, 5 and 9, respectively, unpatentable.

Accordingly, Applicant respectfully requests the rejection to be withdrawn.

### III. Conclusion

To the extent an extension of time is needed for consideration of this response, Applicant hereby request such extension and, the Commissioner is hereby authorized to charge deposit account number 502117 for any fees associated therewith.

Date: 6/23/06

Respectfully submitted,

By: ETC  
Lawrence T. Cullen  
Reg. No.: 44,489

Motorola Connected Home Solutions  
101 Tournament Drive  
Horsham, PA 19044  
(215) 323-1797